

Application No. 10/628,368
Reply to the Office action of 07/14/2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings in the application:

Listing of Claims:

1. (currently amended) A nacelle for housing a gas turbine engine having a pressurized oil system for lubricating components thereof, said nacelle comprising: an annular inlet lip defining a leading edge of said nacelle which circumscribes an engine air inlet area therewithin, said inlet lip having a conduit therein in fluid flow communication with said pressurized oil system of said gas turbine engine, said conduit having an inlet and an outlet interconnected by an arcuate flow path, the conduit disposed within said inlet lip to constrain and extending arcuately around a substantial portion of said inlet lip, the conduit disposed radially outward from the air inlet area, the conduit being adapted to direct pressurized engine oil to flow therethrough along said arcuate flow path, said conduit around said air inlet area from said inlet to said outlet thereof, and said conduit being in heat transfer communication with an outer surface of said inlet lip.
2. (currently amended) The nacelle as defined in claim 1, wherein said conduit is annular having a radius substantially the same as a radius of the annular inlet lip.
3. (original) The nacelle as defined in claim 1, wherein said conduit comprises a tube fixed within said inlet lip.
4. (original) The nacelle as defined in claim 3, wherein said tube is integrally cast within said inlet lip.
5. (original) The nacelle as defined in claim 1, wherein said inlet lip is cast and said conduit is integrally cast therewithin.

Application No. 10/628,368
Reply to the Office action of 07/14/2005

6. (original) The nacelle as defined in claim 1, wherein said conduit comprises a circumferential inner liner fixed to an inner surface of said inlet lip, defining said oil passage between said inner surface of said inlet lip and said inner liner.
7. (original) The nacelle as defined in claim 6, wherein said inner liner and said inlet lip are sheet metal.
8. (original) The nacelle as defined in claim 1, wherein said inlet lip comprises reinforcing structural supports.
9. (original) The nacelle as defined in claim 1, wherein said inlet lip comprises a plurality of annular conduits therein.
10. (original) The nacelle as defined in claim 9, wherein said plurality of annular conduits are integrally formed within said inlet lip.
11. (currently amended) The nacelle as defined in claim 1, wherein the system includes a control system to regulate oil flow, the control system including at least one sensor for sensing foreign object damage to the pressurized oil system and at least one counter-including-taking-measures apparatus operative to prevent oil leakage from the oil system in the event that said foreign object damage to the oil system is detected.
12. (original) The nacelle as defined in claim 1, wherein said nacelle is operably engaged to an aircraft.
13. (currently amended) A power plant assembly comprising:
a gas turbine engine having a pressurized oil system for lubricating components thereof;
a nacelle housing said gas turbine engine having an inlet lip defining a leading edge of said nacelle which circumscribes an engine air inlet area therewithin; and

Application No. 10/628,368
Reply to the Office action of 07/14/2005

a conduit, defined within said inlet lip outside of said engine air inlet area, the conduit defining an arcuate flow path extending therethrough from an inlet ~~thereof~~ to an outlet ~~thereof~~ of said conduit, said arcuate flow path being disposed radially outside said engine air inlet area and extending around a majority of a perimeter of the inlet lip, the conduit communicating with said pressurized oil system for circulation of engine oil therethrough, said conduit being in heat transfer communication with an outer surface of said inlet lip.

14. (original) The power plant assembly as defined in claim 13, wherein said conduit is annular.
15. (original) The power plant assembly as defined in claim 13, wherein said conduit comprises a tube fixed within said inlet lip.
16. (original) The power plant assembly as defined in claim 15, wherein said tube is integrally cast within said inlet lip.
17. (original) The power plant assembly as defined in claim 13, wherein said conduit is integrally formed within said inlet lip.
18. (original) The power plant assembly as defined in claim 17, wherein said conduit comprises a plurality of oil passages integrally defined within said inlet lip.
19. (original) The power plant assembly as defined in claim 17, wherein said inlet lip is cast and said conduit is integrally cast therewithin.
20. (original) The power plant as defined in claim 13, wherein said conduit comprises a circumferential inner liner fixed to an inner surface of said inlet lip, said oil passage being defined between said inner surface of said inlet lip and said inner liner.

Application No. 10/628,368
Reply to the Office action of 07/14/2005

21. (original) The power plant as defined in claim 20, wherein said inner liner and said inlet lip are sheet metal.
22. (original) The power plant as defined in claim 13, wherein said inlet lip comprises reinforcing structural supports.
23. (original) The power plant as defined in claim 13 further comprising a control system to regulate oil flow, the control system including at least one sensor for sensing foreign object damage to the oil system and at least one counter-measure apparatus operative by the control system in the event that such damage is sensed.
24. (original) The power plant as defined in claim 13, wherein said power plant assembly is operably engaged to an aircraft.
25. (currently amended) A method of preventing ice build up on a nacelle inlet lip and cooling engine oil, comprising the steps of:

providing a nacelle housing a gas turbine engine and having an arcuate conduit within an inlet lip thereof defining a circumferential oil passage therein which circumscribes an engine air inlet area, enabling heat transfer communication between said conduit and an outer surface of said inlet lip; and

circumferentially circulating pressurized engine oil used to lubricate said gas turbine engine through said conduit around said engine air inlet area directly along an arcuate flow path between an inlet and an outlet of said conduit, said arcuate flow path extending around a majority of a perimeter of said inlet lip;

thereby cooling said engine oil and heating said outer surface of said inlet lip.